

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-61 (Cancelled)

Claim 62 (Currently Amended): A method for conveying resistance to beet necrotic yellow vein virus (BNYVV) to a sugar beet plant, comprising:

preparing a DNA fragment that corresponds to nucleotides 153 to 3258 of RNA1 of said virus, wherein said nucleotides 153 to 3258 of RNA1 represent a 3' truncated sequence of BNYVV; and wherein a 5' end primer and a 3' end primer are used to obtain the DNA fragment, said 5' end primer consisting of 5'-CGCGGATCCACCATGGCAGATTCGTTC-3' (containing a BamHI and NcoI restriction site and nucleotides identical to nucleotides 153-168) or 5'-GACGAATTCAAGTCGTCTTTC-3' (containing an EcoRI restriction site and nucleotides complementary to nucleotides 288-301); and said 3' end primer consisting of 5'-GACGAATTCGAAAGATGAGTCTA-3' (containing an EcoRI site and nucleotides identical to nucleotides 2799-2812) or 5'-CGCAGATCTTTAACTGCTCATCACCAAC-3' (containing a BglII site and nucleotides complementary to nucleotides 3244-3258); and stop codon;

introducing said DNA fragment, operatively linked to a promoter that is active in sugar beet plants, into a sugar beet plant cell to obtain a transformed sugar beet cell; and
regenerating a transgenic sugar beet plant from the transformed sugar beet plant cell.

Claim 63 (Previously Presented): The method of claim 62, wherein the fragment is introduced into the cell by means of a DNA vector comprising said DNA fragment and transcription and translation regulatory sequences operably linked therewith.

Claim 64 (Currently Amended): A transformation vector for conveying resistance to BNYVV to a plant, comprising a DNA fragment consisting of a DNA fragment that corresponds to nucleotides 153 to 3258 of RNA1 of said virus, and transcription and translation regulatory sequences operably linked therewith, wherein said nucleotides 153 to 3258 of RNA1 represent a 3' truncated sequence of BNYVV, and wherein a 5' end primer and a 3' end primer are used to obtain the DNA fragment, said 5' end primer consisting of 5'-CGCGGATCCACCATGGCAGATTCGTTC-3' (containing a BamHI and NcoI restriction site and nucleotides identical to nucleotides 153-168) or 5'-GACGAATTCAAGTCGTCTTTC-3' (containing an EcoRI restriction site and nucleotides complementary to nucleotides 288-301); and said 3' end primer consisting of 5'-GACGAATTCGAAAGATGAGTCTA-3' (containing an EcoRI site and nucleotides identical to nucleotides 2799-2812) or 5'-CGCAGATCTTTAACTGCTCATCACCAAC-3' (containing a BglII site and nucleotides complementary to nucleotides 3244-3258); and stop codon.

Claim 65 (Currently Amended): A transgenic plant cell, exhibiting resistance to BNYVV, comprising in its genome at least two copies of a DNA fragment comprising RNA1 of said virus, wherein a 5' end primer and a 3' end primer are used to obtain the DNA fragment, said 5' end primer consisting of 5'-CGCGGATCCACCATGGCAGATTCGTTC-3' (containing a BamHI and NcoI restriction site and nucleotides identical to nucleotides 153-168) or 5'-GACGAATTCAAGTCGTCTTTC-3' (containing an EcoRI restriction site and nucleotides complementary to nucleotides 288-301); and said 3' end primer consisting of 5'-GACGAATTCGAAAGATGAGTCTA-3' (containing an EcoRI site and nucleotides identical to nucleotides 2799-2812) or 5'-CGCAGATCTTTAACTGCTCATCACCAAC-3' (containing a BglII site and nucleotides complementary to nucleotides 3244-3258); and stop codon.

Claim 66 (Previously Presented): The transgenic plant cell of claim 65, wherein said DNA fragment corresponds to nucleotides 153 to 3258 of RNA1 of said virus, and wherein said nucleotides 153 to 3258 of RNA1 represent a 3' truncated sequence of BNYVV.

Claim 67 (Previously Presented): The transgenic plant cell of claim 65, wherein said cell is part of a sugar beet plant that is resistant against BNYVV.

Claim 68 (Currently Amended): A transgenic sugar beet plant exhibiting resistance to BNYVV, comprising plant cells having in their genome at least two copies of a DNA fragment comprising RNA1 of said virus, wherein a 5' end primer and a 3' end primer are used to obtain the DNA fragment, said 5' end primer consisting of 5'-CGCGGATCCACCATGGCAGATTCGTTC-3' (containing a BamHI and NcoI restriction site and nucleotides identical to nucleotides 153-168) or 5'-GACGAATTCAAGTCGTCTTTC-3' (containing an EcoRI restriction site and nucleotides complementary to nucleotides 288-301); and said 3' end primer consisting of 5'-GACGAATTCGAAAGATGAGTCTA-3' (containing an EcoRI site and nucleotides identical to nucleotides 2799-2812) or 5'-CGCAGATCTTTAACTGCTCATCACCAAC-3' (containing a BglII site and nucleotides complementary to nucleotides 3244-3258); and stop codon.

Claim 69 (Previously Presented): The transgenic sugar beet plant of claim 68, wherein said DNA fragment corresponds to nucleotides 153 to 3258 of RNA1 of said virus, and wherein said nucleotides 153 to 3258 of RNA1 represent a 3' truncated sequence of BNYVV.

Claim 70 (Currently Amended): The Progeny of the transgenic sugar beet plant of claim 68, wherein said progeny of the transgenic sugar beet plant exhibit resistance to BNYVV, and further wherein said progeny have in their genome at least two copies of the DNA fragment comprising RNA1 of said virus.

Claim 71 (Currently Amended): The seeds of the transgenic sugar beet plant of claim 68, wherein said seeds of the transgenic sugar beet plant can be grown into a plant that exhibits resistance to BNYVV, and further wherein said seeds have in their genome at least two copies of the DNA fragment comprising RNA1 of said virus.

Claim 72 (Currently Amended): The vegetatively reproducible structures from the transgenic sugar beet plant of claim 68, wherein said vegetatively reproducible structures from the transgenic sugar beet plant can be grown into a plant that exhibits resistance to BNYVV.